

Application No.: 09/663,265
Office Action Dated: February 14, 2006
Response to Office Action: April 28, 2006

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AMENDMENTS TO THE CLAIMS

1. (currently amended) A method for determining when a request for higher transmission rate should be granted to a mobile station that has access to a communication system comprising the steps of:

calculating a first indicator using a second indicator, for all active connections;

deciding whether to grant the mobile station access to use the requested higher transmission rate based on a comparison of at least one of the first indicator and the second indicator relative to at least one blocking threshold;

tracking at least one of the indicators for a indicators, if the mobile station is granted access to use the requested higher transmission rate, rate prior to transmissions by the mobile station at the higher transmission rate; and

deciding whether to deny the mobile station access to use the requested higher transmission rate based on a comparison of the at least one tracked indicator to the at least one blocking threshold.

2. (previously presented) The method of claim 1 wherein the first and second indicators contain current loading and interference values.

3. (previously presented) The method of claim 2 wherein the first and second indicators also contain changes in loading and interference values due to connections being dropped or added prior to burst start time.

4. (previously presented) The method of claim 1 further comprising:

denying access at the requested higher transmission rate to the mobile station when the first indicator exceeds the blocking threshold value to avoid degradation of performance of the wireless communication system.

5. (previously presented) The method of claim 3 further comprising:

granting the mobile station access to use a transmission rate that is lower than the requested rate when access at the requested rate is denied.

Application No.: 09/663,265
Office Action Dated: February 14, 2006
Response to Office Action: April 28, 2006

6. (previously presented) The method of claim 1 wherein the mobile station is granted access to use the requested higher transmission rate when the first indicator is less than or equal to the blocking threshold.

7. (previously presented) A method for determining when a request for higher transmission rate should be granted to a mobile station that has access to a communication system comprising:

obtaining a first estimated performance indicator and a second estimated performance indicator for all active connections;

establishing a blocking threshold; and

deciding whether to grant or deny the mobile station access to use the requested higher transmission rate based on a comparison of the first and second indicators relative to the established blocking threshold, wherein the deciding step comprises denying access at the requested higher transmission rate to the mobile station when the first performance indicator exceeds the blocking threshold value to avoid degradation of performance of the wireless communication system, wherein

the obtaining step comprises obtaining a projected receive signal strength indicator rise as the first estimated performance indicator and estimated loading as the second indicator, the projected receive signal strength indicator rise being a ratio of the estimated receive signal strength indicator at the start time to one minus the projected change of loading for the mobile station requesting the new channel divided by one minus the estimated loading.

8. (previously presented) The method of claim 1 further comprising:

establishing a threshold defined by a maximum blocking threshold wherein the maximum blocking threshold is set at a value which will prevent overloading of the communication system.

9. (original) The method of claim 7 wherein the obtaining step further comprises obtaining the projected receive signal strength indicator rise and the estimated loading, each for all active 3 connections.

Application No.: 09/663,265
Office Action Dated: February 14, 2006
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10. (original) The method of claim 7 wherein the estimated loading is the sum of the current loading contributions from each connection which is used to obtain a value of the first indicator.

11. (original) The method of claim 10 wherein the projected loading is the sum of the estimated loading and the change of loading for each possible higher rate which is used to obtain a discrete value of the first indicator for each loading.

12. (original) The method of claim 10 wherein the deciding step grants the mobile station access to the highest possible rate which provides a first indicator value that is below the blocking threshold.

13. (previously presented) The method of claim 8 wherein the maximum blocking threshold is constant for different estimate loading values.

14. (previously presented) The method of claim 8 wherein the maximum blocking threshold decreases as the loading increases.

15. (previously presented) The method of claim 8 wherein the maximum blocking threshold decreases in steps as the loading increases.

16. (previously presented) The method of claim 8 wherein the maximum blocking threshold decreases uniformly as the loading increases.

Application No.: 09/663,265
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17. (currently amended) A method of communicating with a mobile station over a network channel, the method comprising the steps of:

determining whether to grant the mobile station access to a transmission rate higher than a current transmission rate of the mobile station, based on a comparison of at least one channel indicator to at least one blocking threshold;

tracking the at least one channel indicator for a indicator, if the mobile station is granted access to the higher transmission rate, rate prior to transmissions by the mobile station at the higher transmission rate; and

determining whether to deny the mobile station access to the higher transmission rate based on a comparison of the at least one tracked channel indicator to the at least one blocking threshold.

18. (previously presented) The method of claim 17 wherein the at least one channel indicator comprises at least one estimated performance indicator of the network channel for all active connections on the channel, said performance indicator incorporating an estimated channel load including the higher transmission rate.

19. (previously presented) The method of claim 18 further comprising:

granting access at an intermediate transmission rate to a mobile station denied access to the higher transmission rate, said intermediate transmission rate being between the higher transmission rate and the current transmission rate, wherein the intermediate rate is the highest transmission rate to satisfy a desired quality level of the channel relative to the at least one blocking threshold.

20. (previously presented) The method of claim 18 further comprising:

granting access at an elevated transmission rate to a mobile station granted access to the higher transmission rate, based on a comparison of the at least one tracked channel indicator to the at least one blocking threshold, wherein the elevated transmission rate is greater than the higher transmission rate and satisfies a desired quality level of the channel relative to the at least one blocking threshold.